DAVID GRAY & CO. PTY LIMITED
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SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name **AEROSOL OUTDOOR FOGGER WITH CITRONELLA**

Synonym(s) 01749 - MANUFACTURER'S CODE ● DAVID GRAYS OUTDOOR FOGGER (FORMERLY) ● OUTDOOR FOGGER CITRONELLA

1.2 Uses and uses advised against

Use(s) FLY SPRAY ● INSECTICIDE ● PESTICIDE

1.3 Details of the supplier of the product

Supplier name **DAVID GRAY & CO PTY LIMITED**

Address 2 Rawlinson St, O'Connor, WA, 6961, AUSTRALIA

Telephone (08) 9337 4933

Fax (08) 9337 8316

Email general@davidgray.com.au

Website http://www.davidgray.com.au

1.4 Emergency telephone number(s)

Emergency (08) 9337 4933 (B/H)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS (GHS ONLY) ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

GHS classification(s) Aerosols - Flammable: Category 1
Aquatic Toxicity (Chronic): Category 1

2.2 Label elements

Signal word **DANGER**

Pictogram(s)

Hazard statement(s)

H222 Extremely flammable aerosol.
H410 Very toxic to aquatic life with long lasting effects.

Prevention statement(s)

P210
P211
P251
P273

Storage statement(s)

P410 + P412

Response statement(s)

P391

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Do not spray on an	open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid release to the environment.
	Collect spillage.
	Protect from sunlight. Do not expose to temperatures exceeding 50°C.

Disposal statement(s)

P501 Dispose of contents/container in accordance with relevant regulations.

2.3 Other hazards

No information provided.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
C3-C4 ALKANE BLEND	68475-59-2	270-653-6	30 to 60%
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT	64742-47-8	265-149-8	10 to 30%
PIPERONYL BUTOXIDE	51-03-6	200-076-7	1.5%
CITRONELLA OIL	8000-29-1	616-771-7	0.6%
TETRAMETHRIN	7696-12-0	231-711-6	0.4%
PERMETHRIN	52645-53-1	258-067-9	0.2%
WATER	7732-18-5	231-791-2	30 to 60%

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

Inhalation If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.

Skin If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.

Ingestion For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting. Ingestion is considered unlikely due to product form.

First aid facilities None allocated.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Dry agent, carbon dioxide, foam or water fog. Prevent contamination of drains and waterways.

5.2 Special hazards arising from the substance or mixture

Highly flammable aerosol. May evolve toxic gases (carbon oxides, hydrocarbons) when heated to decomposition. Aerosol may explode at temperatures exceeding 50°C. Eliminate all ignition sources including cigarettes, open flames, spark producing switches/tools, heaters, naked lights, pilot lights, mobile phones, etc when handling. Aerosol cans may explode when heated above 50°C. May evolve nitrogen oxides when heated to decomposition.

5.3 Advice for firefighters

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

5.4 Hazchem code

2Y

2 Fine Water Spray.

Y Risk of violent reaction or explosion. Wear full fire kit and breathing apparatus. Contain spill and run-off.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel.

6.2 Environmental precautions
Prevent product from entering drains and waterways.

6.3 Methods of cleaning up
If aerosol can damaged or leaking, contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal.

6.4 Reference to other sections
See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities
Store in a cool (< 50°C), dry, well ventilated area, removed from incompatible substances, heat or ignition sources and foodstuffs. Ensure aerosol containers/ cans are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for damaged/ leaking containers. Large storage areas should have appropriate fire protection systems.

7.3 Specific end use(s)
No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters
Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m³	ppm	mg/m³
Mineral Oil Mist	SWA (AUS)	--	5	--	--

Biological limits
No biological limit values have been entered for this product.

8.2 Exposure controls
Engineering controls Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Flammable/explosive vapours may accumulate in poorly ventilated areas. Vapours are heavier than air and may travel some distance to an ignition source and flash back. Maintain vapour levels below the recommended exposure standard.

PPE

Eye / Face	With prolonged use, wear safety glasses and splash-proof goggles.
Hands	With prolonged use, wear PVC or rubber gloves.
Body	Not required under normal conditions of use.
Respiratory	Where an inhalation risk exists, wear a Type A-Class P1 (Organic gases/vapours and Particulate) respirator. Where the boiling point is < 65°C, use an AX filter type.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	WHITE LIQUID (AEROSOL DISPENSED)
Odour	SLIGHT ODOUR
Flammability	HIGHLY FLAMMABLE
Flash point	-104°C (Propellant)
Boiling point	-42°C (Propellant)
Melting point	NOT AVAILABLE
Evaporation rate	NOT AVAILABLE
pH	NOT AVAILABLE

9.1 Information on basic physical and chemical properties

Vapour density	NOT AVAILABLE
Specific gravity	NOT AVAILABLE
Solubility (water)	INSOLUBLE
Vapour pressure	315 - 345 kPa @ 25°C
Upper explosion limit	9.6 % (Propellant)
Lower explosion limit	1.5 % (Propellant)
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

10. STABILITY AND REACTIVITY

10.1 Reactivity

Carefully review all information provided in sections 10.2 to 10.6.

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

Polymerization is not expected to occur.

10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials

Incompatible with oxidising agents (e.g. hypochlorites), acids (e.g. nitric acid), alkalis (e.g. sodium hydroxide), heat and ignition sources.

10.6 Hazardous decomposition products

May evolve carbon oxides and hydrocarbons when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Health hazard summary	May be harmful. This product has the potential to cause adverse health effects with over exposure. Use safe work practices to avoid eye or skin contact and inhalation.
Eye	Irritant. Contact may result in irritation, lacrimation, pain and redness.
Inhalation	Low to moderate irritant. Over exposure may result in irritation of the nose and throat, with coughing. High level exposure may result in breathing difficulties.
Skin	Irritant. Contact may result in irritation, redness, rash and dermatitis. May cause sensitisation by skin contact.
Ingestion	Ingestion is considered unlikely due to product form.

PIPERONYL BUTOXIDE (51-03-6)

LD50 (oral)	2600 mg/kg (mouse)
LD50 (dermal)	200 mg/kg (rabbit)

CITRONELLA OIL (8000-29-1)

LD50 (oral)	4.6 g/kg (mouse)
LD50 (dermal)	4700 mg/kg (rabbit)

TETRAMETHRIN (7696-12-0)

LD50 (oral)	1000 mg/kg (mouse)
LD50 (dermal)	2500 ug/kg (rat)
LC50 (inhalation)	2 g/m³ (mouse)

PERMETHRIN (52645-53-1)

LD50 (oral)	383 mg/kg (rat)
LD50 (dermal)	1750 mg/kg (rat)
LC50 (inhalation)	485 mg/m³ (rat)

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Very toxic to aquatic life with long lasting effects. Toxic to bees and fish and only slightly toxic to pets and livestock.

12.2 Persistence and degradability
Active ingredients breakdown in the environment by hydrolysis or oxidation in sunlight.

12.3 Bioaccumulative potential
The active ingredients do not bioaccumulate in animal systems.

12.4 Mobility in soil
No information provided.

12.5 Other adverse effects
No information provided.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal For small amounts, absorb contents with sand or similar and dispose of to an approved landfill site. Do not puncture or incinerate aerosol cans. Contact the manufacturer/supplier for additional information (if required).

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	1950	1950	1950
14.2 Proper Shipping Name	AEROSOLS	AEROSOLS	AEROSOLS
14.3 Transport hazard class	2.1	2.1	2.1
14.4 Packing Group	None allocated.	None allocated.	None allocated.

14.5 Environmental hazards
No information provided.

14.6 Special precautions for user

Hazchem code 2Y

GTEPG 2D1

EMS F-D, S-U

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Poison schedule Classified as a Schedule 6 (S6) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Classifications Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

Hazard codes	F+	Extremely flammable
	N	Dangerous for the environment
Risk phrases	R12	Extremely Flammable.
	R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety phrases	S16	Keep away from sources of ignition - No smoking.

Inventory listing(s) **AUSTRALIA: AICS (Australian Inventory of Chemical Substances)**
All components are listed on AICS, or are exempt.

16. OTHER INFORMATION

Additional information

SYNERGISM - ANTAGONISM: Ingredients in this product may act together to aggravate or reduce adverse effects. Accordingly the time weighted average concentration (TWA) provided for single ingredients should be considered as a guide only and all due care exercised when handling.

AEROSOL CANS may explode at temperatures approaching 50°C.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:
It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS	Central Nervous System
EC No.	EC No - European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonized System
GTEPG	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m³	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TLV	Threshold Limit Value
TWA	Time Weighted Average

Report status

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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